

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An image forming apparatus for scanning images on first and second originals each having a main scan direction and a sub-scan direction and forming copy images of the scanning images on an obverse side and a reverse side of an image formation medium, the apparatus comprising:

setting means for setting directions of scanning of the first and second originals to one of an automatic of a horizontally positioned original having a transverse main scan direction, an automatic of a vertically positioned original having a longitudinal main scan direction, a portrait of a horizontally positioned original having a transverse main scan direction, a landscape of a vertically positioned original having a longitudinal main scan direction, a landscape of a horizontally positioned original having a transverse main scan direction, and a portrait of a vertically positioned original having a longitudinal main scan direction;

determining means for determining disposing a binding axis in a longitudinal direction if the setting means sets the automatic of the vertically positioned original, the portrait of the vertically positioned original or the portrait of the horizontally positioned original, and determining disposing the binding axis in a transverse direction if the setting means sets the automatic of the horizontally positioned original, the landscape of the horizontally positioned original or the landscape of the vertically positioned original;

first scanning means for scanning the first original conveyed in the direction of scanning of the original set by the setting means;

first recording means for recording image data of the first original scanning by the first scanning means by subjecting the image data to a ~~rotation mirror-image conversion~~ conversion;

first reading means for reading out the image data of the first original recorded in the first recording means without rotating the image data and, providing the data with a binding margin having a width in the transverse direction on the basis of the binding axis if the binding axis determined by the determining means is disposed in the longitudinal direction[, or];

second reading means for reading out the image data of the first original recorded in the first recording means without rotating the image, and providing a binding margin having a width in the longitudinal direction on the basis of the binding axis if the binding axis determined by the determining means is disposed in the transverse direction, the first reading means performing control in reading such that a position of the binding margin on the obverse side is reversed to a position of the binding margin on the reverse side;

first image forming means for forming the image data of the first original reading by the first reading means on the obverse side of the image formation medium;

second scanning means for scanning the second original conveyed in the direction of scanning of the original set by the setting means;

second recording means for recording image data of the second original read by the second scanning means by subjecting the image data to a ~~rotation mirror-image conversion~~;

~~second third~~ reading means for reading out the image data of the second original recorded in the second recording means without rotating the image data or by ~~rotating the image data over 180° if the directions of scanning of the first and second originals are the portrait of the horizontally positioned original or the landscape of the vertically positioned original, or without rotating the image data if the directions of scanning of the first and second originals are the landscape of the horizontally positioned original, the portrait of the vertically positioned original, the automatic of the horizontally positioned original, or the automatic of the vertically positioned original, and providing the data with the binding margin having the width in the transverse direction on the basis of the longitudinal binding axis if the binding axis determined by the determining means, if the~~

directions of scanning of the second original is the portrait of the horizontally positioned original is disposed in the longitudinal direction, or providing the binding margin having the width in the longitudinal direction on the basis of the binding axis if the binding axis determined by the determining means is disposed in the transverse direction, the second reading means performing control in reading such that a position of the binding margin on the obverse side is reversed to a position of the binding margin on the reverse side;

fourth reading means for reading the image data of the second original recorded in the second recording means by rotating the image data by 180°, and providing the data with the binding margin having the width in the longitudinal direction on the basis of the transverse binding axis determined by the determining means, if the directions of scanning of the second original is the landscape of the vertically positioned original;

fifth reading means for reading the image data of the second original recorded in the second recording means without rotating the image data, and providing the data with the binding margin having the width in the transverse direction on the basis of the longitudinal binding axis determined by the determining means, if the directions of scanning of the second original is the automatic of the vertically positioned original or the portrait of the vertically positioned original;

sixth reading means for reading the image data of the second original recorded in the second recording means without rotating the image data, and providing the data with the binding margin having the width in the longitudinal direction on the basis of the transverse binding axis determined by the determining mean, if the directions of scanning of the second original is the automatic of the horizontally positioned original or the landscape of the horizontally positioned original; and

second image forming means for forming the image data of the second original reading by the second to sixth reading means on the reverse side of the image formation medium.

2. (Original) An image forming apparatus according to claim 1, wherein said directions of the first and second originals set by the setting means are a portrait of a horizontally positioned original, a landscape of a vertically positioned original, a landscape of a horizontally positioned original, and a portrait of a vertically positioned original.

3. (Currently Amended) An image forming apparatus according to claim 1, wherein said directions of the first and second originals set by the setting means are a portrait of a horizontally positioned original, a landscape of a vertically positioned original, a landscape of a horizontally positioned original, and a portrait of a vertically positioned original, and

where the directions of reading of the first and second originals are the portrait of the horizontally positioned original or the landscape of the vertically positioned original, the second reading means reading the image data by rotating the image data over  $180^\circ$  and where the directions of scanning of the first and second originals are the landscape of the horizontally positioned original or the portrait of the vertically positioned original, the second to sixth reading means reading the image data without rotating the image data.

4. (Currently Amended) An image forming apparatus according to claim 1, wherein said first recording means recording the image data of the first original scanning by the first scanning means by subjecting the image data to a rotation mirror-image conversion, and said second recording means recording the image data of the second original scanning by the second scanning means by subjecting the image data to a rotation mirror-image conversion.

5. (Currently Amended) An image forming apparatus for scanning images on first and second originals each having a main scan direction and a sub-scan direction and forming copy images of the scanning images on an

obverse side and a reverse side of an image formation medium, the apparatus comprising:

first setting means for setting directions of scanning of the first and second originals to one of an automatic of a horizontally positioned original having a transverse main scan direction, an automatic of a vertically positioned original having a longitudinal main scan direction, a portrait of a horizontally positioned original having a transverse main scan direction, a landscape of a vertically positioned original having a longitudinal main scan direction, a landscape of a horizontally positioned original having a transverse main scan direction, and a portrait of a vertically positioned original having a longitudinal main scan direction;

determining means for determining disposing a binding axis in a longitudinal direction if the first setting means sets the automatic of the vertically positioned original, the portrait of the vertically positioned original or the portrait of the horizontally positioned original, and determining disposing the binding axis in a transverse direction if the first setting means sets the automatic of the horizontally positioned original, the landscape of the horizontally positioned original or the landscape of the vertically positioned original;

second setting means for setting a binding margin;

first scanning means for scanning the first original conveyed in the direction of scanning of the original set by the first setting means;

first recording means for recording image data of the first original scanning by the first scanning means by subjecting the image data to rotation mirror-image conversion;

first reading means for reading out the image data of the first original recorded in the first recording means without rotating the image data and by providing the data with a binding margin having a width in the transverse direction on the basis of the binding axis if the binding axis determined by the determining means is disposed in the longitudinal direction[, or];

second reading means for reading out the image data of the first original recorded in the first recording means without rotating the image, and providing a

binding margin having a width in the longitudinal direction on the basis of the binding axis if the binding axis determined by the determining means is disposed in the transverse direction, ~~the first reading means performing control in reading such that a position of the binding margin on the obverse side is reversed to a position of the binding margin on the reverse side;~~

first image forming means for forming the image data of the first original reading by the first reading means on the obverse side of the image formation medium;

second scanning means for scanning the second original conveyed in the direction of scanning of the original set by the setting means;

second recording means for recording image data of the second original read by the second scanning means by subjecting the image data to a ~~rotation mirror-image conversion~~;

~~second third~~ reading means for reading out the image data of the second original recorded in the second recording means without rotating the image data or by rotating the image data over 180° if the directions of scanning of the first and second originals are the portrait of the horizontally positioned original or the landscape of the vertically positioned original, or without rotating the image data if the directions of scanning of the first and second originals are the landscape of the horizontally positioned original, the portrait of the vertically positioned original, the automatic of the horizontally positioned original, or the automatic of the vertically positioned original, and providing the data with the binding margin having the width in the transverse direction on the basis of the longitudinal binding axis if the binding axis determined by the determining means, if the directions of scanning of the second original is the portrait of the horizontally positioned original is disposed in the longitudinal direction, or providing the binding margin having the width in the longitudinal direction on the basis of the binding axis if the binding axis determined by the determining means is disposed in the transverse direction, the second reading means performing control in reading such that a position of the binding margin on the obverse side is reversed to a position of the binding margin on the reverse side;

fourth reading means for reading the image data of the second original recorded in the second recording means by rotating the image data by 180°, and providing the data with the binding margin having the width in the longitudinal direction on the basis of the transverse binding axis determined by the determining means, if the directions of scanning of the second original is the landscape of the vertically positioned original;

fifth reading means for reading the image data of the second original recorded in the second recording means without rotating the image data, and providing the data with the binding margin having the width in the transverse direction on the basis of the longitudinal binding axis determined by the determining means, if the directions of scanning of the second original is the automatic of the vertically positioned original or the portrait of the vertically positioned original;

sixth reading means for reading the image data of the second original recorded in the second recording means without rotating the image data, and providing the data with the binding margin having the width in the longitudinal direction on the basis of the transverse binding axis determined by the determining mean, if the directions of scanning of the second original is the automatic of the horizontally positioned original or the landscape of the horizontally positioned original; and

second image forming means for forming the image data of the second original reading by the second to sixth reading means on the reverse side of the image formation medium.

6. (Currently Amended) An image forming apparatus according to claim 5, wherein said directions of the first and second originals set by the first setting means are a portrait of a horizontally positioned original, a landscape of a vertically positioned original, a landscape of a horizontally positioned original, and a portrait of a vertically positioned original.

7. (Currently Amended) An image forming apparatus according to claim 5, wherein said directions of the first and second originals set by the first setting means are a portrait of a horizontally positioned original, a landscape of a vertically positioned original, a landscape of a horizontally positioned original, and a portrait of a vertically positioned original, and

where the directions of scanning of the first and second originals are the portrait of the horizontally positioned original or the landscape of the vertically positioned original, the second reading means reading the image data by rotating the image data over 180° and where the directions of scanning of the first and second originals are the landscape of the horizontally positioned original or the portrait of the vertically positioned original, the second to sixth reading means reading the image data without rotating the image data.

8. (Currently Amended) An image forming apparatus according to claim 5, wherein said first recording means recording the image data of the first original scanning by the first scanning means by subjecting the image data to a rotation mirror-image conversion, and said second recording means recording the image data of the second original scanning by the second scanning means by subjecting the image data to a rotation mirror-image conversion.